

**Technical Support for Procurement and Project Management and Private  
Sector Participation to the Ministry of Water and Irrigation, Water  
Authority of Jordan and the Jordan Valley Authority**

Support for Economic Growth and Institutional Reform:  
General Business, Trade & Investment IQC

**Financial Management in AWC:  
Strategy and Activities for Implementation**

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## **ACRONYMS**

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|        |   |
|--------|---|
| AGWA   | Amman Governorate Water Authority   |
| ASEZ   | Aqaba Special Economic Zone   |
| ASEZA  | Aqaba Special Economic Zone Authority   |
| AWC    | Aqaba Water Company   |
| BOT    | Build-Operate-Transfer  |
| COBOSS | COBOL-Based Billing System  |
| EBIT   | Earnings before Interest and Taxes  |
| EBITDA | Earnings before Interest, Taxes, Depreciation and Amortization                    |
| DSCR   | Debt Service Coverage Ratio   |
| FAS    | Financial Accounting System   |
| GIS    | Geographic Information System   |
| GOJ    | Government of Jordan  |
| GTZ    | Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation Society) |
| IAS    | International Accounting Standards  |
| IRR    | Internal Rate of Return   |
| JD     | Jordanian Dinar   |
| JVA    | Jordan Valley Authority   |
| LEMA   | Lyonnaise Des Eaux-Montgomery Watson Arabtech Jardaneh                            |
| LLC    | Limited Liability Company   |
| MCM    | Million Cubic Meters  |
| MIS    | Management Information System   |
| MWI    | Ministry of Water and Irrigation  |

|       |  |
|-------|--|
| NARUC | National Association of Regulatory Utility Commissioners |
| NGWA  | Northern Governorates Water Authority                    |
| O&M   | Operations and Maintenance                               |
| OMS   | Operations Management Support Project                    |
| PSP   | Private Sector Participation                             |
| PMU   | Project Management Unit                                  |
| SWOT  | Strengths, Weaknesses, Opportunities, Threats            |
| TAPS  | Technical Assistance for Private Sector Participation    |
| UFW   | Unaccounted for Water                                    |
| US\$  | United States Dollars                                    |
| USAID | United States Agency for International Development       |
| WAJ   | Water Authority of Jordan                                |
| WAN   | Wide Area Network  |

## **EXECUTIVE SUMMARY**

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As the date of the planned corporatization of WAJ Aqaba draws closer, TAPS is shifting the emphasis of earlier efforts in analyzing the feasibility of AWC, to ones that are providing details and documents of key steps to support the transformation of WAJ Aqaba into a self-standing entity to be known as the Aqaba Water Company. The purpose of this report is to present TAPS' strategy, and a set of activities, for the coming months as the project continues to assist WAJ Aqaba/AWC in meeting its needs in the area of financial management.

When the Aqaba Water Company (AWC) is currently scheduled to open its doors for business in early 2004, it will need, among other things, to assert responsibility for the management of its own finances. WAJ Aqaba management has stressed that financial management is the key area in which it lacks expertise, requires assistance and would welcome training and "hands-on" technical assistance as soon as possible.

TAPS outlook on the prospects for, and feasibility of, the corporatization of WAJ Aqaba has not changed since the Prefeasibility Study, but rather, been reinforced. In fact, during the 8 or 9 months since the Prefeasibility Study was completed, TAPS has learned some additional details and fine points on the nature of some of the challenges that AWC will face, which are presented and discussed so that WAJ Aqaba/AWC will be able to address them in a timely manner, especially those challenges with financial implications. These challenges are not unusual, and ones that newly created companies commonly face.

To better understand some of these challenges, TAPS undertook an analysis of the likely strengths, weaknesses, opportunities and threats that AWC will have or face, with specific reference to its competitive position. This analysis underscores the conclusion of the Prefeasibility Study that AWC will work in a more challenging financial environment in the near future than WAJ Aqaba has done in the past. The most telling part of this challenge will occur in the first three years of AWC's existence, that is, from 2004 to 2006.

Though the resources and level of effort available are limited, TAPS' strategy and set of activities in financial management are geared to help WAJ Aqaba/AWC to meet these challenges, which are not unusual for a newly corporatized company, in a timely way. The basic financial position of AWC should remain strong: a steady customer base, steady revenue flows, positive profits, and even stronger cash flow. Few new companies begin life from such an advantageous financial position. By careful preparation and training to meet new challenges, AWC's financial position should remain strong.

The financial management needs of AWC, as with any company, can be broken down into four main areas:

- Financial Accounting and Reporting
- Financial Analysis

- Financial Planning and Budgeting
- Financing Activities.

At present, the Financial Accounting System (FAS) project is providing substantial resources to attempt to address the first point, that is, the financing accounting and reporting needs of AWC. Setting up such an accounting and reporting system for AWC is the pilot activity of the FAS project.

Previous TAPS reports<sup>1</sup> in financial management have addressed relevant aspects of overall financial management, including, financial analysis, financial planning and budgeting, and financing activities. To fully implement all the remaining aspects of financial management is, clearly, a task of months and years, and far beyond the resources of TAPS.

The strategy of TAPS, therefore, is to focus on completing five specific set of activities between now and the creation of AWC so that the staff of WAJ Aqaba/AWC will, through focused training and “hands-on” technical assistance during the next six months, be prepared to meet the essential requirements of their new responsibilities and challenges early in the life of AWC. Since AWC’s finances will meet their biggest challenge during the period 2004-2006, it will be critical that AWC manages its finances with particular care during this span of time. A good way to do this is through a detailed, month-by-month budget for these three years. Such a budget will be one of the key activities and deliverables by TAPS during the coming months.

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<sup>1</sup> Chemonics International, Aqaba Water Company Prefeasibility Report, January 2003; Chemonics International, Proposed Financial Management and Accounting System for the Aqaba Water Company: Initial Design and Training Recommendations, March 2003; Chemonics International, Billing and Collection System for the Aqaba Water Company, August 2003.

## SECTION I

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### Introduction

The present report builds on previous reports by Chemonics International in the area of financial management in WAJ Aqaba/AWC. Some of the key, relevant findings of these previous reports are summarized below for the readers' convenience and ease of reference.

The Aqaba Water Company Prefeasibility Study (January 2003) developed a long term financial plan and indicative budget of annual investment costs, operations and maintenance (O&M) costs, revenues, net income and cash flow. The study also presented a financial analysis of the long-term financial viability of AWC, and indicated how some of the future financing needs might be met. The study indicated that the proposed corporatization of AWC was technically, institutionally, legally and financially feasible, although, owing to an increased cost structure, AWC's financial performance will not be as strong as it formerly was.

The Proposed Financial Management and Accounting System for the Aqaba Water Company: Initial Design and Training Recommendations, (March 2003), assessed how AWC can best meet its new needs and requirements in the area of financial management as it is being transformed into the AWC. The report examined the current state of financial management in WAJ headquarters. At present, WAJ headquarters assumes virtually all the responsibility for financial management and accounting, a fact which will have several implications for WAJ Aqaba's path of transition during 2003. The report also recommended some training needs for WAJ Aqaba/AWC to meet its new financial responsibilities. As the present report argues, it is now time to begin to address those training needs.

The Billing and Collection System for the Aqaba Water Company, (August 2003) provided a detailed income generation framework for AWC, and assessed how AWC could continue to make improvements in the efficiency of billing and collection so that it could increase revenue and income generation. It noted the concerted, successful on-going efforts by the management of WAJ Aqaba to improve billing and collections during the last 5 years, and how their plans for future improvements are consistent with best practices.

Section II outlines the future financial environment for AWC and implications for financial management. In order to understand these challenges, and to design technical assistance and training to help AWC address them, this section of the report first summarizes the general business environment in which AWC will operate. It does this by discussing the strengths, weaknesses, opportunities and threats that AWC has or will shortly face. The chapter then discusses the particular financial challenges that AWC will need to address, with a focus on the short to medium term, and what the implications for financial management will be.

Section III first summarizes the current state of financial management in WAJ Aqaba. It then identifies and discusses the key areas of financial management that WAJ Aqaba/AWC will need to develop: financial accounting and reporting, financial analysis, financial planning and budgeting, and financing activities. Tariffs, which also play a key role in financial management, are another important factor in financial management, though one at present outside the control of WAJ Aqaba/AWC.

Section IV discusses the TAPS strategy and a set of five specific activities to assist AWC to develop financial management capacity during the coming months.

The present report, drawing on previous submissions, builds upon themes and recommendations developed in these works to presenting a strategy and set of specific activities that TAPS is prepared to undertake during the coming months to support the development of financial management capability in AWC.



## SECTION II

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### **AWC's Business Environment: Implications for Financial Management**

The financial management team that will be created at AWC will face a number of financial challenges once AWC is established. Many of these challenges will be concentrated in the first three years of operations, that is, during the period 2004-2006.

In order to understand these challenges, and design training and technical assistance to help AWC address them in a timely manner, this section of the report first summarizes the business environment that will confront AWC, then discusses the particular financial challenges that AWC will need to address, with a focus on the short to medium term, and what the implication for financial management will be.

A useful way to assess the future needs of AWC in financial management, and to summarize some of the insights that TAPS has gained into the business dynamics of AWC, is to assess the strengths, weaknesses, opportunities and threats that AWC will have, and need to address<sup>2</sup>. As a part of this analysis, the report also considers the competitive forces that will determine in part the competitive position of AWC. Such an analysis will also help to highlight the issues that financial management will need to address, and point to the areas that TAPS can be of most assistance in supporting AWC.

#### **Strengths**

##### Strong Competitive Advantage.

The competitive advantage of a company within an industry can be analyzed by discussing the four primary factors that typically determine a company's competitive position within an industry: the bargaining position of buyers, the bargaining position of suppliers, the threat of entrants, and the threat of substitutes.

Before looking at these specific components of competitive advantage, it can be stated that, as is common with many public utilities, WAJ Aqaba has operated essentially as a monopoly (even though competition does not appear to have been proscribed in the past) in providing water and wastewater services to the governorate of Aqaba, and therefore its competitive advantage has been very strong. One entity, WAJ Aqaba, has essentially constituted the water and wastewater industry in the Aqaba governorate.

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<sup>2</sup> This analysis, known as a SWOT analysis, is commonly undertaken to gain an understanding of a company's business, competitive, and financial position in an industry. The term "weaknesses" is a traditional one used in such an analysis, and is not meant pejoratively, nor does it imply any shortcomings on the part of management. Rather, it often highlights the fact that companies make strategies and decisions to compete in certain areas or segments of a market, and as a necessary result, they may not be as strong in other areas.

Non-residential users (that is, industrial and commercial customers) pay what is by world standards, a high rate of 1 JD per cubic meter for water, and 0.5 JD per cubic meter for wastewater, and appear to have limited opportunities to obtain their water from other sources at lower cost.

AWC's position could remain strong, though it will face new challenges as certain elements of monopoly begin to give way, as discussed below, to some forms of competition. Given the structural changes and reforms that are taking place in the water sector in Jordan, management at AWC may, in fact, be challenged to maintain this dominant competitive position, as discussed below<sup>3</sup>.

It should be noted that because of its historical position of monopoly, WAJ Aqaba has also had to assume some social responsibilities that, strictly speaking, may have worked against its business interests. The residential base of customers does not, from a purely business point of view, appear to be particularly attractive. The water and wastewater tariff, which averages about 240 fils per cubic meter, is fairly low by international standards. In addition, the low consumption in residential households in Aqaba yields low revenue per household from this customer group. WAJ Aqaba's total revenue from residential users is only about one-tenth that of its non-residential users. Transaction costs meanwhile, are relatively high for residential users, given the need to read individual meters, bill, and collect, and for the staff of WAJ Aqaba to deal with often vociferous, time-consuming complaints. There appears to be a large element of cross-subsidy between the two main customer groups.

One future possibility facing AWC, then is that it could lose some of its attractive non-residential users, while retain all or most of its residential uses.

### Management at WAJ

TAPS has had many opportunities to meet with the management of WAJ Aqaba. They work long hours and have been active in solving problems. As noted in the TAPS report on billing and collection, they have taken a number of sound steps to improve billing and collection over the past five to six years. Management has also been successful in reducing unaccounted for water during the last several years. The experience and attitude of current management will continue to be available to AWC once it begins operations in early 2004. In view of their past performance, and the need to retain key staff for the future, salary increases, especially for those who have performed well, merit consideration.

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<sup>3</sup> This analysis looks at some issues from point of view of AWC. To be sure, from the point of view of Aqaba, and the Jordanian economy in general, the desired goal is to have access to low cost, safe water, even if in some cases this is not in the financial interest of AWC. TAPS would not endorse a policy where the cost of water would be raised beyond an economically reasonable level merely to provide financial support AWC. The most important thing for Aqaba, and the Aqaba Special Economic Zone, is to benefit from the economic activities that require water, even if this means in some cases that the financial position of AWC is disadvantaged. This principle implies that fair competition with AWC should be encouraged where it can provide benefits to users in terms of price and convenience.

Staff and managers in WAJ headquarters in Amman are similarly hardworking and looking for creative ways to improve performance and service delivery.

### **Weaknesses**

As the management of WAJ Aqaba has noted, the main weakness that WAJ Aqaba has faced, such as the lack of decentralization, the lack of a private sector based, computerized accounting system, and the low government pay scales, are the main focus of WAJ's efforts to begin to decentralize. However, should the effort to decentralize fail to yield the desired results, then this fact would remain a weakness, and could threaten the performance, and financial results, of AWC.

### **Opportunities**

The clearest potential opportunity awaiting AWC is the greater freedom that will come through decentralization. Current WAJ Aqaba management feels hampered by the present highly centralized system. Decentralization has the potential to enable AWC to fill current gaps in qualifications and capabilities in staff that exist because of the government pay scale which makes it difficult to offer attractive remuneration. With decentralization, current management at WAJ Aqaba also believes that they will be able manage operations more effectively, and, in the area of financial management, to target more aggressively accounts receivable.

Another possible opportunity awaiting AWC is that the ASEZ will attract more industrial and commercial customers than expected; this could increase the demand for water and improve revenues. (At the same time, this would accelerate the time by which AWC would need to supply more water and could potentially move forward the projected date for the building of the desalination plant.)

### **Threats**

It has been noted that the creation of AWC will open new opportunities for the former WAJ Aqaba. At the same time, there are potential threats that could place its business operations and finances at some risk. None of these threats are particularly unusual, nor should they necessarily prove debilitating to AWC if they should come to pass, provided that the emergence of them can be identified in a timely manner and that management can take effective measures to mitigate their effects.

### **Higher Cost Structure for AWC**

Historically, WAJ Aqaba has benefited from a low cost supply of water, and low operations and maintenance costs. As the TAPS Prefeasibility Study indicated, however, this state of affairs will change owing to the bulk extraction water fee, and higher O&M

cost with the new wastewater treatment plant that will come on stream in 2005. In the next decade, O&M costs for the construction of desalination plant are also expected to increase. As the Prefeasibility Study has also indicated, however, based on the estimates and assumptions adopted, net profit and cash flow should remain positive throughout the 25 year horizon

AWC's costs for staff salaries will also increase. WAJ has indicated that they will not be in a position to take back any of the current staff that are not needed in AWC. At the same time, AWC will need to hire additional qualified staff at relatively high salaries. Qualified recruits from the Aqaba area are limited, and it is expensive to recruit staff from Amman or other areas of Jordan and to persuade potential candidates to move to Aqaba. These facts also point in part to the important role that training can play for AWC in developing skills where such skills can not easily be recruited.

Thus, it is almost certain that the cost for salaries of AWC will rise. In many cases, an increase is warranted and overdue. It appears that at least part of this cost can be recovered if the new staff can continue the progress that has been made in reducing unaccounted for water further, in improving billing and collecting, in collecting outstanding accounts receivable, and in improving accounting and reporting and analyzing ways to further reduce costs. To be sure, profits are expected to remain positive for AWC for the foreseeable future. Care will need to be exercised, though, to ensure that salaries do not grow too rapidly, especially during the period 2004-2006 when profits and cash flow of AWC will be under some pressure.

#### Threat of New Entrants

This is a potential threat for AWC that comes from existing non-residential customers. The cost of producing water through desalination has decreased significantly. Non-residential customers have the option of switching to desalination by installing a small scale plant. This has already occurred in one case.

#### Threat of Substitutes

The water that comes from the Disi wells is fairly pure, and ready for drinking without treatment other than chlorination. Some non-residential customers in Aqaba, however, do not need water of this quality, and can in fact do with re-use water (that is, wastewater that has been treated to certain standard.) As a result, they argue that they should pay a lower tariff for a lower quality of water. WAJ has negotiated an arrangement with one large user to reduce their tariff for re-use water from 1 JD per cubic meter to .7 per cubic meter.

#### Limited Benefits from Corporatization

It is anticipated that corporatization will lead to an improvement over the current arrangements in which WAJ Aqaba is merely a branch of WAJ and given little input into

management. While it seems likely that moving from a highly centralized system to a more decentralized would lead to improvements, it needs to be anticipated that decentralization may not necessarily lead to the full realization of AWC's potential as envisioned. AWC will be freer to operate, but it will be subjected to governmental rules and regulations that may make its daily operations less efficient than would be the case if it were a fully private sector entity. It should not be forgotten that AWC will remain a wholly owned government enterprise, and international experience demonstrates that state owned enterprise remain subjected to a number of inefficiencies, and that greater improvement usually comes through greater private sector participation. The impact of this threat should be mitigated by the fact that WAJ is keenly interested in improving performance, and has indicated a potential interest in possibly utilizing additional forms of private sector involvement once AWC is created and fully operational.

#### Delays, or other Problems, in the Financial Accounting System (FAS) Project

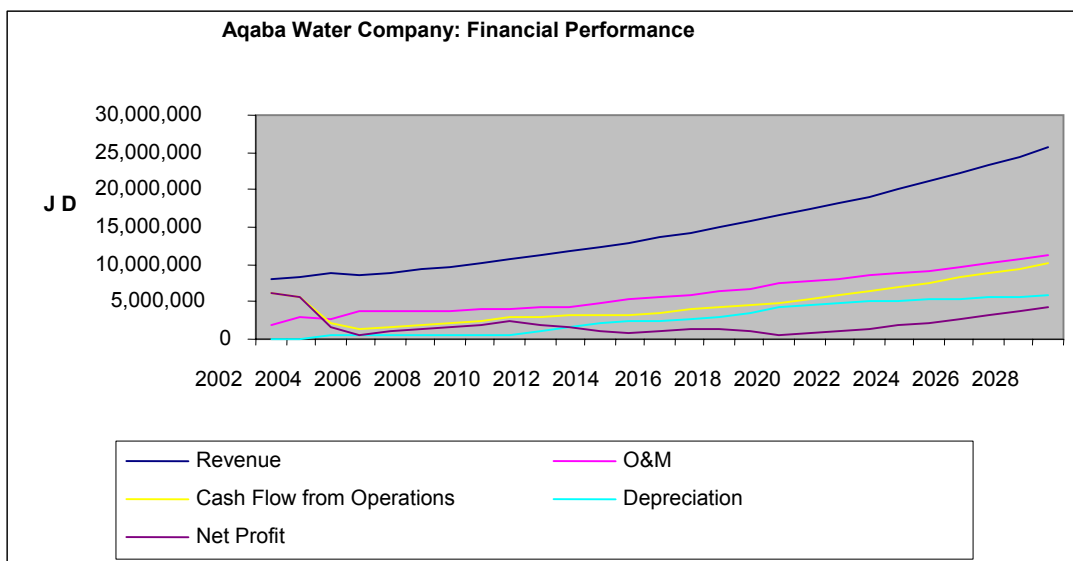
The Financial Accounting System project has selected WAJ Aqaba/AWC to be the pilot governorate in its efforts to introduce a computerized, accrual-based accounting system into WAJ. Previous TAPS reports have discussed the FAS Accounting System project, and the implications of any delays with the program.

The AWC Coordinating Committee is aware of these issues, is monitoring them closely, and has stated in a recent meeting that it was imperative to have the financial accounting system ready for operation at the starting date of AWC.

#### **Specific Financial Management Issues Facing AWC**

The preceding section addressed the general factors that could potentially influence the performance of AWC. Some of these factors are financial in nature; all directly or indirectly could play a role in the financial future of AWC

In discussing the needs of financial management for AWC, it is useful to revisit briefly the financial section of the TAPS Prefeasibility Study. The following graph illustrates the performance of some of the main financial indicators for AWC over a 25 year horizon.



In the financial model developed in the TAPS Prefeasibility Study, it was argued that AWC will likely incur additional costs that will present a challenge to its profitability and cash flow. The additional costs include bulk water fees, higher O&M costs for a new wastewater treatment plant, inclusion of depreciation as an operational expense and capital investments in utility plant that will also produce increases in O&M and depreciation expenses.

The impact of these additional outlays will clearly be to reduce the profitability of AWC compared to that currently enjoyed by WAJ Aqaba. According to the model, net profits will decline from the 2000-2003 level about 6.3 million JD per year to 1.7 million JD per year for the years 2004 to 2028. Cash flows will be higher, but still below recent levels.

As the graph illustrates, profit and cash flow will remain positive. Several caveats apply however.

First, as stressed in the TAPS' Prefeasibility Report, these are only estimates based on current conditions. As discussed in the TAPS Prefeasibility Study, demand conditions could change, and the potential weaknesses and threats cited could be realized. Actual financial results could be worse than those projected (At the same time, it should be noted that it is also possible that they could be better than expected). The projections used in the Prefeasibility Study adopted a "most-likely" case scenario for the future of AWC's financial performance, which lay between a "best-case" and a "worst-case" scenario, and included consideration of the elements discussed in the previous part of this section. The Prefeasibility Study also presented sensitivity analyses, and switching values, of the key factors that will affect the financial viability of AWC. (For a full discussion of these points, please consult the TAPS' Aqaba Water Company Prefeasibility Report, January 2003.)

Second, the role of financial management will take on particular importance because the financial performance (measured by net income and cash flow) will not be as robust as it was in previous years. Yet the staff at WAJ Aqaba have little or no skills or experience in financial management. This fact points again to the importance of providing training to the WAJ Aqaba/AWC staff.

Third, the years 2004-2006 are particularly critical years because both net profit and cash flow are projected to be low. Developing month-by-month budgets for these three years are recommended (as discussed in the following section) in order to provide a roadmap for financial management for AWC at a critical period in its operating history.

The clear implication is that AWC will have to manage its finances with particular care and oversight over the next three years. The next section addresses specific areas where AWC will need to build its capacity in financial management to meet this challenge.

## **SECTION III**

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### **Future Needs of AWC in Financial Management**

This section summarizes the current state of financial management in WAJ Aqaba and identifies the key areas of financial management that WAJ Aqaba/AWC will need to develop: financial accounting and reporting, financial analysis, financial planning and budgeting, and financing activities. Tariffs, which also play a key role in financial management, are another important factor in financial management, though one at present outside the control of WAJ Aqaba/AWC.

### **Current State of Financial Management in WAJ Aqaba**

AWC will need, among other things, to assume responsibility for the management of its own finances. Management at WAJ Aqaba has identified the development of capabilities in financial management as one of their key requirements as they begin the transformation into AWC.

The limited responsibility of WAJ Aqaba in areas of financial management reflects the highly centralized WAJ system. As a previous TAPS report on financial management for AWC noted, financial management, including accounting, is at present almost completely centralized in WAJ headquarters in Amman.<sup>4</sup> All financial transactions are booked in WAJ headquarters. Governorates send all vouchers to WAJ headquarters on a daily or weekly basis, or both (LEMA has been decentralized for purposes of accounting even though it remains a branch of WAJ). All transactions are entered twice: once to the cash set of books for the purposes of the government budget, and the second to the accrual set of books. WAJ holds manual records for booking financial transactions for both cash and accruals. Journal entries, payment vouchers and receipt vouchers are not broken down to the governorate level when booking these transactions at WAJ headquarters. WAJ financial statements are issued once per year on December 31.

WAJ Aqaba produces and delivers water to its residential and non-residential customers in Aqaba, and bills them for water use. WAJ Aqaba employees collect payments, and the money collected is deposited daily into a WAJ bank account and transferred directly to WAJ headquarters in Amman. WAJ headquarters in Amman bills and collects for government customers. WAJ Aqaba does not currently keep any accounts. WAJ Aqaba does not have a bank account or authority to borrow. WAJ Aqaba's only financial management responsibilities are to add the day's receipts for deposit in the WAJ bank account at the local bank and to keep track of WAJ Aqaba expenditures from petty cash.

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<sup>4</sup> A Financial Management and Accounting System for the Aqaba Water Company: Initial Design and Training Recommendations, April 2003



WAJ Aqaba does not receive an approved operating budget. WAJ headquarters pays all expenditures except petty cash. WAJ headquarters in Amman sends funds to WAJ Aqaba on the basis of a prepared budget for O&M and investment costs. There is no direct connection between the amount of money WAJ Aqaba remits to WAJ in Amman and the funds it receives for its operations, maintenance and capital investments. According to WAJ Aqaba, the budget that WAJ sets for it has little flexibility or ability to react to necessary investments that could provide a higher rate of return, such as investments to reduce unaccounted for water (UFW). They also comment that the highly centralized system, where permission from WAJ in Amman is required for many aspects of day to day operations, hampers their ability to operate in the most efficient manner.

As a consequence of the highly centralized financial and accounting system, WAJ Aqaba and other individual governorates, which are passive participants in the current process, do not have the experience or staff at present to manage their own finances. They clearly need their own financial accounting systems, financial reports, ability to analyze and interpret those reports, the ability to plan and budget, and to have access finance to cover temporary shortfalls in cash flow, or to make needed capital investments. These new needs in financial management are discussed in more detail in the following section of this report.

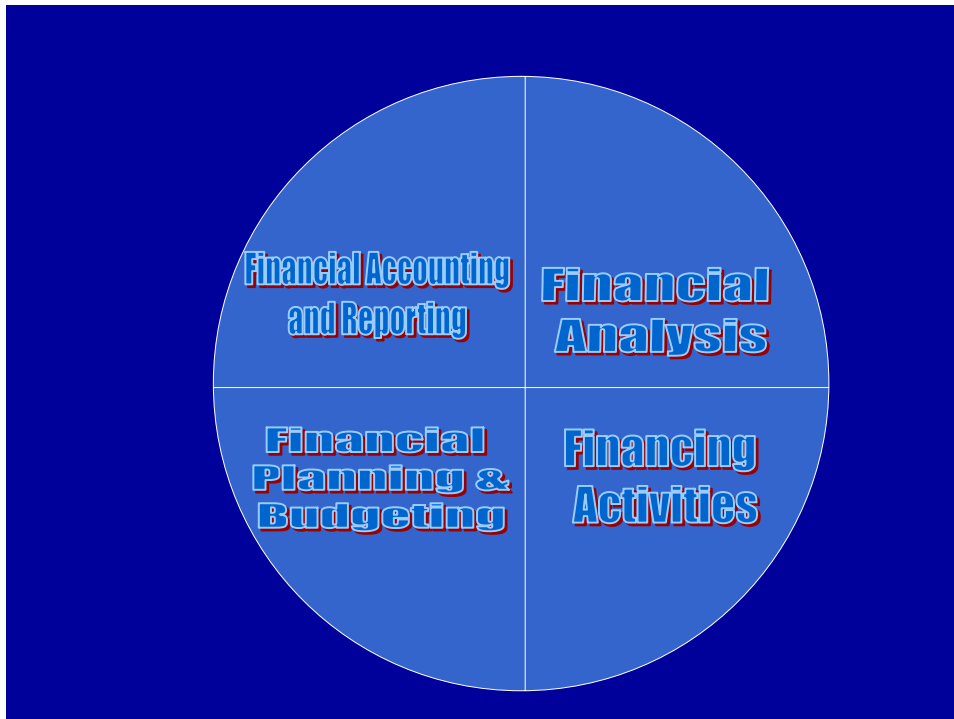
### **New Needs in Financial Management at AWC**

As an integral part of its transformation, AWC will need to develop new capabilities in financial management as one of the key items on its agenda of corporatization and change.

A financial management system is a necessary tool to provide managers at AWC with ability to effectively run the company. International best practices prescribe that a financial management system provide the data and information that is needed to meet legal requirements, ensure that revenues and expenses can be reconciled, operate the company on a more efficient basis, and, eventually, provide potential outside investors with needed financial data when growing demand for water early in the next decade will trigger a need for additional capacity which will most likely be met through new desalination plants.

The financial management system will also be a key tool to address the specific financial challenges that AWC will face during the period 2004-2006, when its cash flow will be under pressure from new costs, as discussed in the previous chapter.

The key elements of financial management can be summarized as follows in the following figure:



The four elements are closely linked, and form parts of a whole. *Financial accounting and reporting* provides the financial managers and general managers with the means to meet their legal reporting requirements and with crucial data and information that can be scrutinized and subjected to *financial analysis* to indicate on how the company is performing. Financial analysis can point to critical potential shortcomings or weaknesses and indicate where management's attention should be focused to address problems and meet medium and long term goals. The financial accounts and reports, and the analysis that they are subjected to, can help in preparing *financial plans and budgets* that will guide the company in the short, medium and long term. Financial analysis, and planning and budgeting, can identify any shortfalls in funds generated from internal company operations, and point to the need to raise external sources of short or long term finance, typically debt or equity, through its *financing activities*.

A fifth element needs to be mentioned as well. In overall financial management, financial accounting and reporting, financial analysis, planning and budgeting, and financing activities, are normally under the control of the management of the company, often with the concurrence of the board of directors in key policy matters. In most competitive industries, companies set the price of their product themselves, though the final choice is guided by experiences with, and perceptions of, what the market will bear. In the case of monopoly utilities, the price (or tariff) of the utility service is usually regulated by government to prevent the potential abuse of monopoly, or near monopoly, power. Thus, in the case of AWC, a fifth element, the tariff will also play a critical role in its finances of AWC, though at present it is outside the purview of management. The tariff and the

quantity of water supplied, determine the company's revenue, which stands at the top of a company's income generation framework.<sup>5</sup>

## **Financial Accounting and Reporting**

One reason that managers in the water sector in general have a difficult time managing is that government accounting systems often make it difficult to pinpoint where the problems lie.

As WAJ Aqaba is transformed into AWC, the integrated Financial Accounting System (FAS) project, financed by USAID, offers the possibility that AWC may be able to avail itself of the services that FAS intends to provide to all the WAJ governorates.<sup>6</sup> One of the objectives of FAS is to use commercial, accrual-based accounting that conforms to international accounting standards.

The main objectives of the FAS program are to:

- Update the MWI and WAJ accounting procedures and systems so that FAS can provide financial information that would allow management to evaluate the operations of MWI and WAJ.
- Provide training to WAJ and MWI employees to enable them to successfully update, operate and maintain the new system upon completion of the TA.
- Standardize internal reports that deliver relevant information to the end user.

**The FAS Project, moreover, aware of the importance of AWC in the program of WAJ to decentralize the operations of the governorates, has made AWC a pilot for its project, and has committed to having an operational financial accounting system up and running by January 1, 2004.**

## **Financial Analysis**

The new Financial Accounting System, if all goes according to plan, will provide reams of data, information and reports. To make full use of this information, managers will need the skills to be able to interpret and analyze this information, and then take the appropriate measures to correct problems, or, where the indicators point to successes, to reinforce them.

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<sup>5</sup> For a discussion of the income generation framework for AWC, see the TAPS report, Billing and Collection Systems for the Aqaba Water Company, August 2003

<sup>6</sup> See the TAPS report, Proposed Financial Management and Accounting System for the Aqaba Water Company: Initial Design and Training Recommendations, April 2003

Managers will thus need to analyze, or have staff capable of providing analyses for them, AWC's income statements, statements of cash flow, and balance sheets. Among other things, these financial statements can be used to derive financial indicators, which enable management to focus on some of the key measures of performance.

Careful analysis of these statements and the judicious use of indicators will offer insight into the following sample of financial questions that managers in the private sector typically pose:

- Are profits adequate for the level of revenues, assets, and net worth of the company?
- Are inventories too high (an expensive mistake that can threaten cash flow) or too low (suggesting that the smooth functioning of operations and maintenance may be hampered)?
- Are the levels of plant and equipment costs too high for the level of water delivered? This is a mistake that, as GTZ has suggested, has plagued WAJ in the past.
- Are accounts receivable growing too quickly? Are collections lagging behind billings? Is the level of unaccounted for water rising?
- Are O&M costs out of line? Are salaries higher than they should be in comparison with other companies? Is too much money being paid for maintenance and repairs of vehicles?

Timely information and analysis of the key factors in running the business can enable managers to take corrective steps before problems get out of hand, and help keep the company on track in meeting its medium and long term goals, as determined by the company's strategic plan, which is one of the subjects of the following section.

To be sure, it takes time to develop a financial system in a company and for the key personnel to learn how to analyze and use the data and information that it provides. The goal of the training program discussed below is to enable AWC managers to meet the most important and essential of the tasks of financial management.

### **Financial Planning and Budgeting**

In its planning activities, AWC will need to define its long-range goals and objectives. It will then implement those plans through medium-term budgets and short-term budgets. In many water companies, the hierarchy of plans often includes the following documents:

- The Mission Statement
- The Business (Strategic) Plan
- Financial Plan
- Three Year Budget
- Annual Operating Plan
- Annual Capital Plan

The mission statement is usually a succinct summary of the basic goal of a water company. An example might be, “To provide safe, affordable water in a cost effective manner.” Business plans provide a comprehensive, strategic approach to achieving the levels of service and performance described in the company’s mission statement. The purpose of a business plan is to focus attention on key objectives and policies and the steps to be taken to achieve the end-of-plan objectives and performance targets.

Earlier in its efforts to support the corporatization of AWC, TAPS presented an illustrative business plan for AWC<sup>7</sup>, though it provided many specific details as well. This illustrative plan covers the five year period from January 1, 2004 to December 31, 2008, consistent with the time horizon used in the government’s Economic Development Plans. (The Board and senior staff of AWC have the authority to select a different planning horizon if they choose to do so.)

Financial planning is closely tied to the business plan. Business plans include projections of capital investments, operating expenses and operating revenues over the plan period that will be useful in the development of capital and recurrent budgets during the planning period. Business plans provide the guidance necessary for the formulation of the more immediate financial and operational plans.

A budget is a refinement and expansion of the strategic plans. It consists of two primary sections, an estimation of the expected revenues and an estimation of expected expenses. In the estimated revenue section, a functional breakout of revenue classifications should be followed. Revenues derived from operations should be listed by classification. The second section of the statement should present the revenue required to sustain operations during the budgeted period.

It is expected that TAPS, as a part of its work plan, will further define and refine the business plan in the last quarter of 2003 in consultation with WAJ and WAJ Aqaba. This plan will attempt to establish and quantify goals and objectives, especially during the early years of the Plan period. In effect, the outputs of TAPS work, developed with WAJ and WAJ Aqaba, will help to form key elements of the business plan, especially during the initial stages of service improvement and organizational development.

The previous section of this report discussed, and the TAPS Prefeasibility study detailed, the years 2004 to 2006 should be particularly challenging for AWC. If revenues fall or expenses rise, then AWC could face a financial shortfall that may create difficulties and even call its corporatization into question. A clearly defined budget guide it through this three year period will be of great assistance to the management at AWC.

For this reason, TAPS recommends that a detailed three year, month by month, budget be developed for the period 2004 to 2006, with as much disaggregation as possible, to help management navigate during this challenging time and so that plans may be developed to cover any potential shortfalls may be encountered.

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<sup>7</sup> Chemonics International, Aqaba Water Company Business Plan (Illustrative), January 2003

## Financing Activities

Financial planning and budgeting, and financial analysis, help to identify potential shortfalls in cash flow available to the company.

For a company such as AWC, typical types and sources of financing could include the following:

- AWC Retained Earnings
- Government contributions
- Donor contributions
- Debt financing
- Equity financing
- PSP Options: Lease, BOT, Concession

There is nothing necessarily wrong with such a shortfall. In the short run, companies often need recourse to working capital financing to make up, for example, for seasonal mismatches between revenue and expenses. Over a longer term, companies often need access to equity and long term debt financing in order to make long term investments in plant and equipment.

Developing budgets helps to identify any needs for short term or long term financing. One of the results of the TAPS efforts to develop a detailed three year budget for AWC will be the identification of any such needs for financing activities.

One of the principle benefits of a new financial management system could come in the early years of the next decade, when AWC will need to find new sources of water once the Disi pipeline reaches its capacity. If things have gone well, AWC will have the ability to turn to its finance and accounting division to secure needed investment capital from outside investors in the new desalination plants that will be required to supply the Aqaba Special Economic Zone and the rest of the Aqaba governorate.

## Tariff Issues

As noted in this and other TAPS reports, many elements of change are currently underway in WAJ. Though tariff issues have not yet become a major issue, the time will come when the beginnings of a new approach to tariffs may be required. Such an approach may involve the recognition that a “one tariff fits all” approach may need to acknowledge that different specific physical and cost circumstances in the different governorates may require differentiated tariffs. Should private sector participation be deemed appropriate, such an approach may also require that a tariff regime allow for cost recovery with a reasonable rate of return.

The day of addressing tariff issues may come sooner than anticipated. As noted in the TAPS “Billing and Collection System for AWC,” report, AWC may come under some

pressure to reduce the non-residential tariff because some of its best customers have explored, or will explore, the option of availing themselves of less expensive sources of water, notably desalination plants. (However, it should be noted that current tariff policy does not permit changes in tariffs set by the Council of Ministers.) According to WAJ Aqaba, a leading hotel asked for a reduction in their tariff, because desalination offered a lower cost option. Under centralized guidelines and procedures, negotiations over the tariff were not possible, and the customer was lost. WAJ Aqaba views this case in a way as another example of the benefit of decentralization, such as the flexibility to negotiate. WAJ Aqaba is in a more advantageous position to engage in negotiations than WAJ Amman as it is more familiar with its customer base and can negotiate effective agreements that benefit both parties. WAJ Aqaba has noted that it may be able to actually raise overall revenue by negotiating lower tariffs in some case.

TAPS is prepared, should the issue of tariffs come to the fore during the next six months, to provide (consistent with the resources remaining available to it) WAJ with its experience in tariff design, and the implications of such design for the regulatory framework.

## **SECTION IV**

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### **TAPS Strategy and Activities for Financial Management**

In slightly less than four months, AWC is scheduled to be created and start work as a decentralized company. Although the current staff has little or no experience in financial management, this responsibility is one that they will need to assume. Comprehensive, practical, “hands-on” training of current staff is of the essence to help AWC to meet this responsibility.

This section of the report first outlines TAPS strategy to assist AWC to create a capacity for financial management so that it will be prepared to meet its initial obligations as a limited liability company. It then lists and discusses five specific activities that TAPS will undertake to implement the strategy.

#### **Strategy to Support AWC in Financial Management**

As indicated in the present report, financial management will be one of the most important responsibilities that AWC will have to assume, and the one for which they require the most preparation owing to a lack of previous experience and training in this area.

The TAPS strategy, and set of activities, follows from the previous discussion of needs in the areas of financial management. Of the four areas identified only one at present is fully provided for, namely, the financial accounting system under the FAS project. This project has a large number of resources.

TAPS has been active in coordination with FAS, and realizes that the development of a computerized accounting system would be of potentially great benefit to AWC, and eventually to the other WAJ governorates. The FAS program offers opportunities for WAJ Aqaba to develop its new financial accounting system. It will at the same time need to ensure that this system meets its particular needs, and that it is available in time to meet its new legal requirements in the area of financial statements.

The strategy of TAPS in providing assistance to AWC in the area of financial management, therefore, is to focus on those areas which:

- Are not covered as such by FAS
- Follow-up on some of the earlier work of TAPS in financial management
- Are of the essence in creating financial management capacity for AWC
- Lend themselves well to training and “hand-on” technical assistance



- Permit as much ground as possible to be covered with the limited resources and level of effort available to TAPS in the area of financial management

The foregoing considerations point to the fact that TAPS' resources in financial management will be best utilized by providing training and "hands-on" technical assistance to the current staff in WAJ Aqaba in the areas of financial analysis, budgeting and planning, financing activities, and tariffs, as indicated below.

The nature and importance for overall successful management of financial analysis, budgeting and planning, financing activities, and tariffs, has been discussed in the previous section. The goal of the strategy and set of activities is to give senior management and financial management staff at AWC a comprehensive grounding in financial management. It should be noted that it is anticipated that some one will be recruited from outside WAJ Aqaba/TAPS to be the director of financial management. The tasks of this person will be made easier by the extent to which the current staff is trained in, and conversant with, the goals, tasks and details of financial management. The proposed training will equip the current staff with a comprehensive understanding of financial management which will complement the "on-the-job" training that they will in effect receive on an ongoing basis from the financial manager, and help to ensure that it will be productive and successful.

The strategy and set of activities that TAPS has developed meets these goals. TAPS has held several discussions with the WAJ Aqaba staff to develop a training program that meets their needs in the financial area, is practical, and as comprehensive as possible. The staff of WAJ Aqaba is in agreement on what their needs are in the area of financial management, and that the proposed training program will be of great help in meeting such needs.

The training program has two basic objectives. The first is to provide training to senior management on how a financial management system will work, the type of information that it can provide them, how to interpret such information, and how they can use the financial management system to monitor and continue their efforts to improve the overall performance of AWC.

The second objective is to provide more detailed, comprehensive information on financial management to those who will be staff members in the financial management of AWC. Following a detailed introduction to financial management, the training courses will include Planning and Budgeting, Financial Analysis and Financial Indicators, Financing Activities, and Tariffs. (Senior managers at WAJ Aqaba, to the extent that they have time and availability, will be welcome and encouraged to attend the latter, lengthier courses as well.)

In order to ensure that the training is timely and relevant, the training program will draw on the financial model for AWC developed in the TAPS Prefeasibility Study. The

training will also provide an opportunity for WAJ Aqaba to develop the three year budget, which will be one of the key outputs of these activities.

### **Activities to Implement Financial Management Strategy**

The set of five activities are designed to present the management and staff of WAJ Aqaba/AWC with a comprehensive grounding in the key elements of financial management. The activities will also serve to prepare some of the key financial management documents that will help to guide them through the initial stages of operation following the creation of AWC.

The five key activities that TAPS proposes to undertake over the next several months in preparation for the creation of AWC are designed to be flexible in nature. If a particular activity should take on special significance as the date for the corporatization of AWC draws closer, then more resources could be devoted to it, and correspondingly less to other activities.

#### **❖ Activity I. Comprehensive Introduction to Financial Management**

##### Objectives.

Training for WAJ and WAJ Aqaba officials, providing a comprehensive grounding in the basic elements of Financial Management, including financial accounting and reporting, financial analysis, financial planning and budgeting, financial modeling, and financing activities.

Initiate efforts to develop a detailed three year budget for AWC for the period 2004-2006.

##### Tasks

Present Training in Amman for WAJ on “Comprehensive Introduction to Financial Management.”

Present training in WAJ Aqaba on “Comprehensive Introduction to Financial Management for AWC” for management and staff. The training program for WAJ Aqaba has two basic parts. The first is to provide training to senior management on how a financial management system will work, the type of information that it can provide them, how to interpret such information, and how they can use the financial management system in their overall management responsibilities. The second objective is to provide more detailed, comprehensive information on financial management to those in WAJ Aqaba who will be a part of the financial management system of AWC

Begin to discuss with staff in WAJ Aqaba, and gather materials in WAJ headquarters, for a detailed three year budget (2004-2006) for AWC.

### Deliverables

Training program on “Comprehensive Introduction to Financial Management.”

Training program on “Comprehensive Introduction for Financial Management for AWC.”

Preliminary development of a detailed three year budget (2004-2006) for AWC. (This deliverable will be completed following the activity on “Planning and Budgeting.”)

## ❖ **Activity II. Financial Management: Planning and Budgeting**

### Objectives

Provide WAJ Aqaba staff with comprehensive training in Planning and Budgeting and “hands-on” technical assistance by continuing the work under Activity I, with specific focus on budgeting for the period 2004-2006.

Complete the detailed three year budget (2004-2006) for AWC. This budget will be a key document to help management to plan for a three year horizon when profit and cash flow will be at lower levels than they formerly were because of higher costs.

### Tasks

Present a comprehensive training program “Planning and Budgeting” for the staff of WAJ Aqaba in advance of travel to Jordan. The training program will discuss the mission statement, the business (strategic) plan, the financial plan, the three year budget, annual operating plan, and the annual capital plan. The nature of these discussions will be practical and focused on developing a comprehensive three year budget for AWC.

Work with relevant parties in WAJ to complete a detailed three year budget for AWC.

### Deliverables

Comprehensive training program on “Planning and Budgeting.”

A final, three year detailed budget for AWC for the years 2004-2006.

### ❖ **Activity III. Financial Management: Financial Analysis and Financial Indicators**

#### Objective

Provide training to WAJ Aqaba staff on how to use the information generated by the accounting and reporting system to undertake financial analysis, and develop and use financial indicators for AWC's financial performance. The training would discuss the use and analysis of the income statement, the statement of cash flow, and the balance sheet. The typical financial indicators, which will be used by management to measure performance of AWC, that may be discussed would include: net profit, cash flow from operations, net income as a percent of revenue, O&M costs as a percent of revenue, return on equity, return on assets, intrinsic value of a company's stock, and NPV of future investments. As with other activities, the development of financial indicators will be exemplary, detailed working documents with practical applications for AWC.

#### Tasks

Develop training program in "Comprehensive Introduction to Financial Analysis" in advance of trip to Jordan.

Present training program in financial analysis and indicators to WAJ and WAJ Aqaba.

Work with WAJ and WAJ Aqaba to develop definitive financial indicators for AWC.

#### Deliverables

Comprehensive training program on Financial Analysis.

Financial indicators for financial performance of AWC.

### ❖ **Activity IV. Financing Activities**

#### Objective

Discuss the types of financing activities that AWC might engage in to meet short term and long term financing needs. Discuss the types of financing that may be available to AWC: AWC's retained earnings, government contributions, donor contributions, working capital from banks, longer term loans, bonds, and equity financing. Specific examples will be developed that are relevant for and applicable to the AWC.

#### Tasks

Develop a training program on "Financing Activities" in advance of travel to Jordan.

Present a training program on "Financing Activities" in Jordan.

Deliverables

Comprehensive training program on “Financing Activities”

❖ **Activity V. Tariffs**Objective

Develop a training program to explain the different possible options when designing a tariff regime.

Discuss different tariff options, including rate of return, price caps, and tariff by competitive bidding (as in a BOT/Concession).

Demonstrate how financial models, applicable to Aqaba, can be used to estimate tariff requirements.

Tasks

Develop a training program on “Tariffs” in advance of travel to Jordan.

Present a training program on “Tariffs” in Jordan.

Present a paper of possible tariff regimes and options.

Deliverables

A comprehensive training program on “Tariffs.”

Consistent with available resources, present a paper of possible tariff regimes and options.

## **Persons Contacted<sup>8</sup>**

Mohammad Al-Sakran, GIS Specialist, WAJ Aqaba

Mahmmoud Barham, Finance Directorate, WAJ Aqaba

Ra'ed Daoud, Managing Director, ECO Consult

Elias M. Dardas, Finance Director, LEMA

Keith Dawe, Bechtel Enterprises (UK) Limited

Abdel-Rahman M. El-Khatib, Executive Privatization Commission/Prime Ministry

Wael Elkhoully, Project Development and Finance, Bechtel

Tayeseer M. Faris, Financial Manager, Water Authority of Jordan

Gary Fullerton, Country Project Manager, Bechtel

Sinan S. Ghosheh, CPA, Senior Partner, Chosheh & Co., Certified Public Accountants.

Hassan Mawajdeh, Eco Consult

Andrew T. O'Neill, Financial Advisor, Nextant

Mohammad Qazzaz, Finance Manager, Ministry of Water and Irrigation, Programme Management Unit

Fadi Abu Saleh, Oracle Applications Consultant, Financial Accounting System Program (FAS)

Na'im Saleh, Head, Subscribers' Directorate, WAJ Aqaba

Raed Abu Soud, Program Management Unit (PMU) Director, Ministry of Water and Irrigation, Water Authority of Jordan,

Hatem Tawfik, ECO Consult

Robert Wagner, World Bank Consultant, Executive Privatization Commission

Emad Zureikat, Assistant Secretary General, WAJ Aqaba

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<sup>8</sup> This list is a cumulative one of persons contacted for the Financial Management component of TAPS. The persons contacted do not necessarily agree with, or endorse the views presented by TAPS in this report.

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<sup>9</sup> This list of references is a cumulative one of those consulted for the financial management component of the TAPS project.

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## **ANNEX D**

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### **TRAINING COURSE ON FINANCIAL MANGEMENT AT AWC**